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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,554	06/02/2006	Akihiro Taniguchi	043890-0791	6219

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EXAMINER

TORRES RUIZ, JOHALI ALEJANDRA

ART UNIT	PAPER NUMBER
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2838

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,554	Applicant(s) TANIGUCHI ET AL.	
	Examiner JOHALI A. TORRES RUIZ	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “at least one of the voltage detection portion, the memory portion and the forced discharge portion is integrated with the equipment circuit” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaizono et al. (U.S. Patent Number 6,714,882), Sato et al. (U.S. Patent Number 6,008,626) and further in view of Thandiwe et al. (U.S. Patent Number 6,268,713).

4. Claims 1 and 9-10: Iwaizono teaches a power supply including a lithium-ion secondary battery (10) (Col.4, Lines 33-34); a temperature detection portion (52) for detecting a temperature of the power supply (10) (Col.5, Lines 8-9); a voltage detection portion (48) for detecting a voltage of the power supply (10) (Col.7, Lines 33-36); and a forced discharge portion for recognizing an abnormality of the power supply when the temperature of the power supply detected by the temperature detection portion is not lower than the first temperature (Col.8, Lines 13-15) and the voltage of the power supply detected by the voltage detection portion is not lower than the first voltage (Col.8, Lines 11-13) and for forcedly discharging the power supply until the voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17); and an equipment circuit fed by the power supply (Col.4, lines 45-47).

Iwaizono does not explicitly teach a notification portion; forcibly discharging the power supply in a state in which a power feed from the power supply to the portable equipment is off, for electrifying the notification portion by the power supply, for making the notification portion notify a message indicating that the abnormality is being avoided.

Sato teaches a power supply (12) being a lithium battery (Col.2, Lines 45-46), a memory for storing temperature and voltage from the battery (Col.2, Lines 61-67) and forcibly discharging the power supply in a state in which a power feed from the power supply to the portable equipment is off (Col.5, Lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Sato in the device of Iwaizono to prevent the lithium battery from being deteriorated (Col.6, Lines 45-51).

Thandiwe teaches a lithium battery pack (Col.3, Lines 28-29) and a notification portion for notifying a message (Col.4, Lines 14-21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Thandiwe in the device of Iwaizono to have notified a user when fault conditions arise (Col.4, Lines 14-15).

5. Claim 2: Iwaizono, Sato and Thandiwe teach the limitations of claim 1 as discussed above. Iwaizono teaches a switch (34) coupled to the power supply (10) and a control portion for turning on the switch when the abnormality of the power supply is recognized (Col.8, Lines 7-10), and turning off the switch when the voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17).

Iwaizono does not explicitly teach the switch is coupled in series with the notification portion. The rearrangement of parts has been held to support a *prima facie* case of obviousness. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.) The location of the switch in Iwaizono would not have modified the operation of discharging the battery when the abnormality is recognized.

6. Claim 4: Iwaizono, Sato and Thandiwe teach the limitations of claim 1 as discussed above. Iwaizono teaches a switch (34) coupled to the power supply (10) and a control portion for turning on the switch when the abnormality of the power supply is recognized (Col.8, Lines 7-10).

Iwaizono does not explicitly teach the switch involved in the power feed from the power supply to the portable equipment. The rearrangement of parts has been held to support a *prima facie* case of obviousness. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.) The location of the switch in Iwaizono would not have modified the operation of discharging the battery when the abnormality is recognized.

7. Claim 5: Iwaizono, Sato and Thandiwe teach the limitations of claim 4 as discussed above. Iwaizono teaches the control portion turns off the switch when the

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voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17).

8. Claim 11: Iwaizono, Sato and Thandiwe teach the limitations of claim 10 as discussed above. The rearrangement of parts has been held to support a *prima facie* case of obviousness. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.) The location of the voltage detection circuit, memory or forced discharge portion in Iwaizono would not have modified the operation of detecting the voltage of the battery, saving battery parameters or discharging the battery when the abnormality is recognized.

9. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaizono et al. (U.S. Patent Number 6,714,882), Sato et al. (U.S. Patent Number 6,008,626) and Thandiwe et al. (U.S. Patent Number 6,268,713) as applied to claims 2 and 4 above, and further in view of Farley et al. (U.S. Patent Number 5,767,659).

10. Claims 3 and 6: Iwaizono, Sato and Thandiwe teach the limitations of claims 2 and 4 as discussed above. Farley teaches a battery comprising a memory that has battery information that can be flashed in a display (302) (Col.3, Lines 62-67); it teaches this information could contain the time left for a discharge to be completed (Col.5, Lines 7-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Farley in the device of Iwaizono to have displayed messages of interest to a user (Col.5, Lines 1-3).

11. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaizono et al. (U.S. Patent Number 6,714,882), Sato et al. (U.S. Patent Number 6,008,626) and Thandiwe et al. (U.S. Patent Number 6,268,713) as applied to claim 1 above, and further in view of Yoshida et al. (U.S. Publication Number 2005/0106455).

12. Claim 7: Iwaizono, Sato and Thandiwe teach the limitations of claim 1 as discussed above. Iwaizono does not explicitly teach an active material of a positive electrode of the lithium-ion secondary battery comprises nickel complex oxide.

Yoshida teaches an active material of a positive electrode of a lithium-ion secondary battery comprises nickel complex oxide (par.3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Yoshida in the device of Iwaizono because it is known in the art as an acceptable material for the positive electrode of a lithium ion battery.

13. Claim 8: Iwaizono, Sato, Thandiwe and Yoshida teach the limitations of claim 7 as discussed above. Iwaizono teaches the second voltage is not lower than 3.85V and not higher than 3.95V for each lithium-ion secondary battery (Col.8, Lines 16-17).

Iwaizono teaches forcibly discharging when the temperature is equal to or greater than 35°C and the voltage is equal or greater than 4V. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie

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case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) (The prior art taught carbon monoxide concentrations of “about 1-5%” while the claim was limited to “more than 5%.” The court held that “about 1-5%” allowed for concentrations slightly above 5% thus the ranges overlapped.); In re Geisler, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of “50 to 100 Angstroms” considered prima facie obvious in view of prior art reference teaching that “for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms].” The court stated that “by stating that suitable protection’ is provided if the protective layer is about’ 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within [applicant’s] claimed range.”). A temperature greater than 35°C allows for temperature between 55°C and 65°C; and voltage greater than 4V allows for voltage between 4.05V and 4.15V.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHALI A. TORRES RUIZ whose telephone number is (571)270-1262. The examiner can normally be reached on M- Alternating F 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Akm Ullah can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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